



## Cohort Review and Program Evaluation Updates

Debbie Staley, RN, MPH  
TB Nurse Consultant  
TB and Newcomer Health Program  
TB Nurse Training, November 14, 2013




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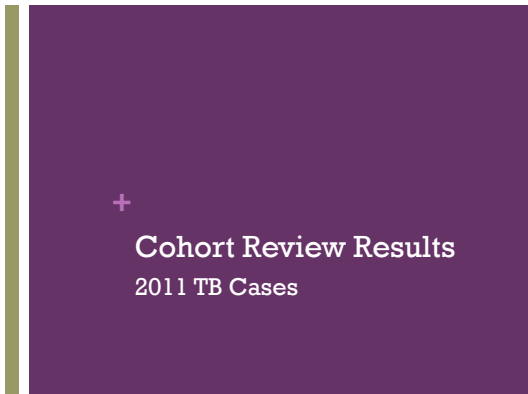
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## + Cohort Review of 2011 Cases

- Conducted in 2012-2013
- Included all 221 reported TB cases
- 10 cohort review sessions
  - 4 regional by polycom
  - 2 individual district reviews by polycom
  - 3 on-site individual district reviews
  - 1 on-site joint review
- The performance overall was excellent!!




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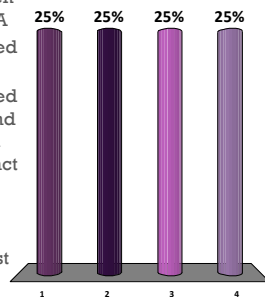
## Virginia Performance – 2011 Cases

NTIP Indicator	Virginia Achievement in Cohort Review	Virginia Performance Target for 2011 TB Cases	2015 NTIP Performance Target
Sputa collection for respiratory site of disease	97.1%	89.0%*	95.7%**
Sputa conversion	78.0%	45.0%*	61.5%**
Drug susceptibility results present	98.9%	94.0%*	100%
Recommended initial therapy	96.8%	91.7%*	93.4%**
Completion of treatment in <366 days	91.1%	87.0%*	93.0%
Known HIV result	91.0%	77.1%*	88.7%**
Contacts elicited	100%	93.0%*	100%**
Contacts completely evaluated	75.1%	92.4%	93.0%

\*VA target met; \*\*2015 national target met

### “Contacts completely evaluated” means:

1. All contacts have been seen by the PHN for TST or IGRA
2. All contacts have completed 1<sup>st</sup> and 2<sup>nd</sup> round testing
3. All contacts have completed the first round of testing and if negative, then are tested again 10 weeks after contact is broken, with sputa done for those with abnormal x-rays or symptoms
4. All contacts have a skin test and chest x-ray



## + Drug Sensitivities

- Only a few lacked drug sensitivities
- Can occur in labs out-of-state, with no isolate sent to DCLs
- Contact labs early to request isolate be sent
- Lack of sensitivities impacts treatment and genotyping



## + Completion of Treatment in ≤366 days

- Excluded from this group:
  - Meningeal TB or ≤age 14 yrs. with disseminated TB
  - Rifamycin resistant cases
  - Dead at diagnosis or who died during treatment
  - Left country before completion
- Often due to alternate regimens for drug intolerance
  - Re-challenge on standard regimen if possible
  - Contact the TB program if an alternate regimen is considered
- Impact of older medical providers – share guidelines

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## + Cohort Review Updates

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## + Cohort Indicators Added for Review of 2012 Cases

- Contacts started on treatment for LTBI
- Contacts that complete treatment for LTBI.
- Does not include:
  - Person identified as TB case through CI
  - Persons with a prior + test for infection that choose to take LTBI Tx
  - Person put on “window” therapy until 2<sup>nd</sup> round testing is negative and treatment stopped

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## + Targets for Cohort Indicators in 2012

- Contacts started on LTBI treatment
  - Virginia Target for 2012 – 70%
  - National 2015 Target – 88%
- Contacts that complete treatment for LTBI
  - Virginia Target for 2012 – 70%
  - National 2015 Target – 79%

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## + Other Cohort Information Changes

- Smear conversion – one week is needed between last + M.tb culture and 1<sup>st</sup> negative culture (with no positive M.tb cultures thereafter)
- HIV
  - Complete within 8 weeks of starting TB Rx
  - Within prior 12 mo. is also acceptable
  - HIV + clients only need most recent HIV labs or progress note indicating HIV Dx
- Clinical case requires 18 wks. therapy

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## + District Program Evaluation

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## + Local Program Evaluation Visits

- Meeting with TB Program Staff
- Discussion of Core Elements of TB Control Program at District Level
- Record Review
- Feedback and Recommendations

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## + Core Elements of TB Program (1)

- Diagnostic services available for TB Suspects and their Contacts – at no cost per *Code of Virginia* § 32.1-50
  - TST/IGRAs
  - Chest x-ray
  - Sputa collection
  - HIV testing
- Lab services: smear, culture, DSTs, and other labs for monitoring of treatment

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## + Core Elements of TB Program (2)

- Managing Persons as TB Suspects or Cases
  - Development of a treatment plan, including
    - Assignment of a case manager
    - Assuring medical evaluation
    - TB treatment- drugs
    - Monitoring for response and toxicity
    - Adherence plan - DOT
    - TB Education
    - Social services – needs identified and referrals
    - Follow-up Plan
- Contact Investigation
- Referral system for other medical problems

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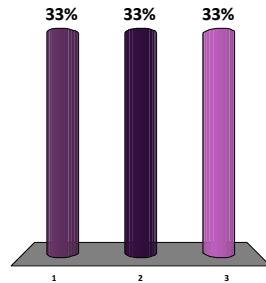
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Does your district have all core elements in place for TB case management?

1. Yes
2. No
3. I think so, but I'm too new to be sure 😊



## + Annual Program Evaluation Project Sputum Conversion Revisited

### + Objectives of the Study

- Determine portion that failed to convert due to extensive disease
- Determine portion that failed to convert where sputa was not collected between day 55 and 60
- Evaluate factors that impacted sputa collection
- Identify strategies to improve sputa collection between day 55 and 60
- Provide a baseline of sputa conversion at the start of the early serum drug level testing for diabetics

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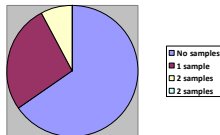
## Cases Evaluated - 2011

- 118 cases with positive sputa cultures
- Conversion documented in 77.1%
- 27 / 22.9% lacking sputum conversion documentation
- One excluded – left country

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## Results – Sputa Collected day 55-60 after treatment start

- 17 (65.4 %) with no sample
- 7 (26.9%) with one sample
- 2 (7.7%) with two samples; neither documented conversion
- None had three samples



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## The 13 with no positive cultures after day 60 -

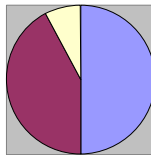
- 3 with 1 or 2 sputa collected between day 55-60
  - 2 would have required collection ON day 60 to find conversion
- 3 (11.5%) can be attributed to PH failure to follow and urge collection after transfer to other jurisdictions
- 3 (11.5%) attributed to client refusal which should have prompted more formal action using TB Control statutes

### + The 11 with positive cultures after day 60 -

- Collection between day 55-60
  - 6 with no collection
  - 4 with 1 sample
  - 1 with 2 samples
- Of these cases
  - 1 was MDR
  - 1 required dose adjustment/low drug levels
  - 1 with no ID of organisms after first culture
  - 4 with presumed delay due to extensive disease

### + And Finally -

- 2 (7.7%) with clinical reasons for not collecting sputa
  - 1 close to death
  - 1 with significant weakness and unable to provide sample



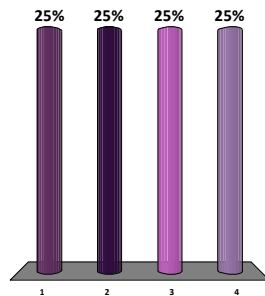
■ Sputa Negative with First Collection After Day 60/Potential for Conversion Improvement, 50%, n=13

■ Persistent Positive after 60 Days/Proxy for Extensive Disease, 42.3%, n=11

□ Clinical Reasons for Not Collecting, 7.7%, n=2

The conclusion from this study is that failure to document sputa conversion was mainly due to:

1. Drug resistance
2. Cases being too sick to convert by day 60
3. Sputa were not collected in a timely manner
4. Clients refused





## + Interventions that may improve performance-

- Staff trainings
  - Encourage scheduling of sputa collection day 55-60 AT treatment start
  - Intervention for clients in facilities or that move out-of-state is a TB nurse case management responsibility
- Active intervention for clients who refuse according to VA TB Control statutes
- Include sputa conversion in the TB nurse case management clinical pathway

## + Weaknesses of the study -

- Evaluated only those that failed to convert
- No information collected on unsuccessful attempts to collect sputa

+ Annual Program  
Evaluation Project - 2013  
Sputa Conversion Revisited x 2!

### + Objectives of this Study – for all with initial positive M.tb sputum cultures

- Determine portion that failed to convert due to extensive disease
- Determine portion that failed to convert where sputa was not collected between day 55 and 60
- Evaluate factors that impacted sputa collection
- Identify the diabetic clients that had early SDL testing and determine this group's sputum conversion rate
- Identify strategies to improve sputa collection between day 55 and 60

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### + What is needed from you -

- Faxed copies of all bacteriology flow sheets for 2012 cases to the TB program
- Write on the bottom of the flow sheet
  - Dates of unsuccessful attempts to collect, if documented in the progress notes
  - Date of first TB drug start
- Keep the records available for phone call interview, to include:
  - Diabetic status
  - If SDL were done and drug dose adjusted
  - Barriers to sputa collection

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### + Things that have changed -

- Sputa conversion must be 1 week after last positive M.tb culture
- Sputa collection recommendations
  - After smear conversion, collect 3 samples a month spread out through the month, not clustered close together
  - 2 sputa collected between day 55-60

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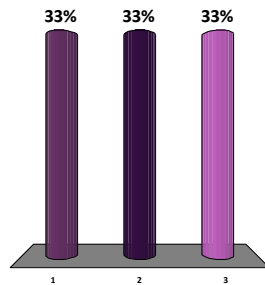
## + Sample Collection -

- Sputa should be induced if a client cannot produce a sample
- Early morning samples are more likely to be successful
- At least one sample a month health care worker observed



## Does your program have a nebulizer for sputa induction?

1. Yes
2. No
3. I think so, but I'm too new to be sure 😊



## + Concluding thoughts -

- Cohort Review and Program Evaluation projects provide feedback to improve performance
- Performance improves when evaluation is included in the program
- Districts can set local goals and develop local strategies for improvement
- Be on the look-out for district program evaluation visits

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Questions??

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